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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,681	11/20/2001	Ukyo Mori	DP-827 US	9011
7590 McGinn & Gibb, PLLC Suite 200 8321 Old Courthouse Road Vienna, VA 22182-3817			EXAMINER DEAN, RAYMOND S	
			ART UNIT 2618	PAPER NUMBER
			MAIL DATE 05/21/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

09/988,681

Applicant(s)

MORI, UKYO

Examiner

Raymond S. Dean

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-24 is/are allowed.
- 6) ☒ Claim(s) 25-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 25 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein (US 6,671,384) in view of Tsuchiya et al. (GB 2055014).

Regarding Claim 25, Klein teaches a driving unit for an electronic device, comprising: a resilient member (Figure 1, Cols. 3 lines 56 – 67, 4 lines 1 – 6, resilient terminal contact (13)); a support section moveably attached to a plate member by said resilient member (Figure 1, Cols. 3 lines 56 – 67, 4 lines 1 – 6, the plate is the printed circuit board, the front and rear of the transducer are support sections).

Klein does not teach a planar voice coil; a first magnet disposed inside said planar voice coil and a second magnet disposed outside the planar voice coil, wherein the first and second magnets are fixedly attached to said support section.

Tsuchiya teaches a planar voice coil; a first magnet disposed inside said planar voice coil and a second magnet disposed outside the planar voice coil (Figure 2, Column 2 of Specification lines 84 – 88, left side of voice coil (3) is the outside and the right side of said voice coil is the inside), wherein the first and second magnets are

Art Unit: 2618

fixedly attached to a support section (Figure 2, Column 2 of Specification lines 84 – 88, the plates are a support section).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the transducer of Klein with the voice coil magnet configuration taught by Tsuchiya for the purpose of providing high fidelity sound production as taught by Tsuchiya.

Regarding Claim 26, Klein in view of Tsuchiya teaches all of the claimed limitations recited in Claim 25. Tsuchiya further teaches the planar voice coil comprising a shape of a quadrilateral frame and the first and second magnets are quadrilateral shaped complementary to the shape of the planar voice coil (Figure 2, Column 2 of Specification lines 84 – 88).

3. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klein (US 6,671,384) in view of Tsuchiya et al. (GB 2055014), as applied to Claim 25 above, and further in view of Porrazzo et al. (5,872,855).

Regarding Claim 27, Klein in view of Tsuchiya teaches all of the claimed limitations recited in Claim 25. Klein in view of Tsuchiya does not teach a second planar voice coil adjacent said planar voice coil in a direction orthogonal to a surface on which the first voice coil is installed.

Porrazzo teaches planar voice coil (Column 6 lines 7 – 11, the voice coil is a planar coil, which means that said coil will be in a two dimensional plane, squares, rectangles, and quadrilaterals have two dimensional planes thus said planar coil can be

Art Unit: 2618

square, rectangular, or quadrilateral shaped) and a second planar voice coil adjacent the first voice coil in a direction orthogonal to a surface on which the first voice coil is installed (Figure 2A, Figure 3C, Column 5 lines 31 – 36, the coils are layered in a direction that is orthogonal to the plane of the sound driver surface (106)).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the voice coil arrangement taught by Porrazzo in the mobile device of Klein in view of Tsuchiya for the purpose of adding versatility to the performance of the speaker as taught by Porrazzo.

***Allowable Subject Matter***

4. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or show a **support section moveably attached to the colored section of the plate member by said resilient member**, said plate member having a transparent central section overlying the display and a colored section adjacent the transparent central section and positioned other than overlying the display. Claim 15, including all claims the depend directly/indirectly from Claim 15, is thus allowable.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

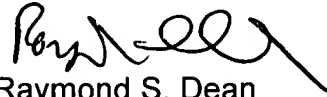
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2618

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Raymond S. Dean  
May 3, 2007



EDWARD F. URBAN  
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